

A new genus of cheline cyprinid fishes

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In a recent review of the cyprinid genus *Barilius* (Howes, 1980), it was noted that one species, *Barilius auropurpureus* Annandale, 1919 was not a member of that genus but that it shared derived characters with the cheline group of cyprinids. This paper amplifies that statement and establishes a new genus to contain the species.

Annandale (1918) described *Barilius auropurpureus* from Inle lake basin, south Shan States in Burma. He did not, however, compare the species with any other *Barilius* and gave no reason for including it in that genus. I have examined a series of specimens collected by Annandale and can find no characters that indicate affinity with *Barilius* or any member of the barilline group (*sensu* Howes, 1980). On the contrary, *auropurpureus* shares apomorph features with the cheline group (*sensu* Howes, 1979). These characters are: marginal overlap of the supraethmoid by the frontals; triangular, lamellate kinethmoid; ethmo-vomerine bloc extended anteriorly and laterally as a shelf; wide midline separation of the medial anterior maxillary processes; anteriorly notched and hooked dentary; truncated supraoccipital; long, posteriorly curved lateral processes on the 2nd vertebra.

Inclusion of *auropurpureus* in an existing cheline genus is precluded on the grounds of its autapomorphic features involving the ethmoid and jaw morphology (see below). I propose therefore that '*Barilius*' *auropurpureus* be assigned to a new genus:

INLECYPRIS gen nov.

TYPE SPECIES. *Barilius auropurpureus* Annandale, 1918

Slender fishes with large eye, pointed snout and obliquely angled mouth; ventral keel present. Supraethmoid produced laterally, the mesethmoid extending anteriorly beyond the supraethmoid as a shelf; preethmoid minute; kinethmoid lamellate, triangular; symphysial notch and process on dentary; large nasal; infraorbitals well developed, the 5th small and contacting the wide supraorbital; frontals narrow, overlapping the posterior margin of the supraethmoid; dilatator fossa small; parasphenoid horizontal, separated from the orbitosphenoid by a shallow septum; minute metapterygoid-quadrate fenestra; vertical cleithral limb short; postcleithrum well-developed, curved mesad; coracoids meeting along their ventral margins; neural complex low; 7 large lamellate supraneurals – 1st & 2nd fused; lateral processes of 1st and 2nd vertebrae elongate and caudally directed; total number of vertebrae 37 (4+10+22+1).

A single species, *Inlecypris auropurpureus* (Annandale, 1918), known only from Inle lake basin, Burma. Annandale (1918; 1922) adequately described the species, its habitat and habits.

RELATIONSHIPS. Within the cheline group *Inlecypris* shares derived characters with *Chela*. The ethmoid region of both taxa is very similar. The supraethmoid is overlapped posteriorly by the frontals, the mesethmoid is depressed and is produced anteriorly as a long shelf, the preethmoids are minute. Both genera have a flat, triangular kinethmoid (Figs 1 A & B). Other synapomorphic features are the enlarged nasal; the morphology of the upper jaw, which in *Chela* lacks a prominent mid-lateral maxillary ascending process and which in *Inlecypris* is reduced to a spine (cf. Figs 2A & B); the posterior curvature of the cranium, reduction of the supraoccipital process and absence of posttemporal fossae; morphology of the supraneurals; morphology and degree of development of the transverse processes on the 1st and 2nd vertebrae. Both taxa also possess an enlarged supracleithrum which covers the

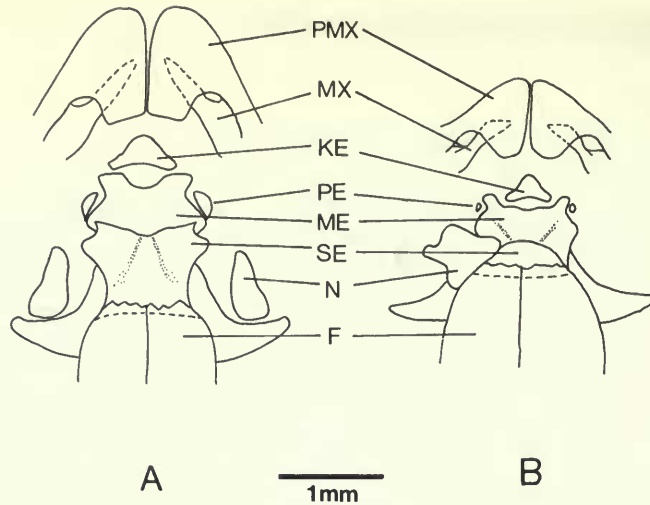


Fig. 1 Dorsal views of the ethmoid regions of A, *Inlecypris auropurpureus* and B, *Chela laubuca*. F, frontal; KE, kinethmoid; ME, mesethmoid; MX, maxilla; N, nasal; PE, preethmoid; PMX, premaxilla; SE, supraethmoid.

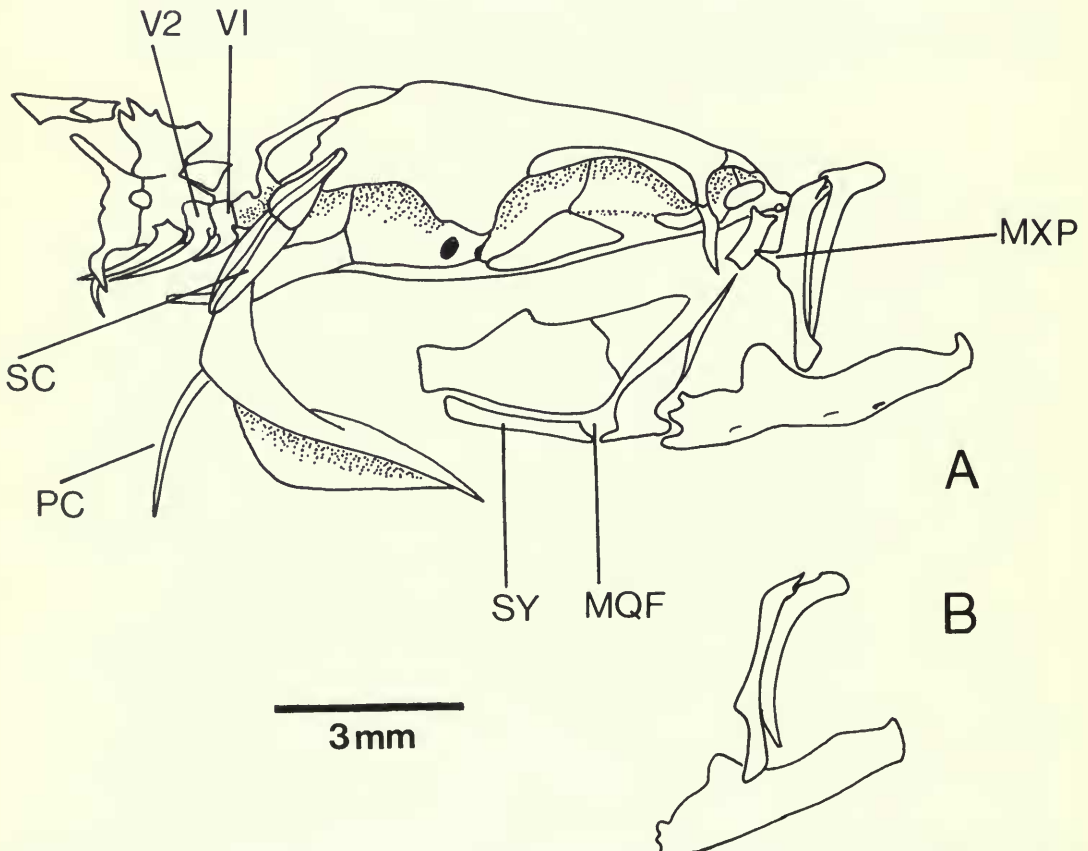


Fig. 2 A, *Inlecypris auropurpureus*, lateral view of the neurocranium with jaws, part of suspensorium, pectoral girdle and vertebral column in articulation. B, *Chela laubuca*, lateral view of jaws. MQF, metapterygoid-quadrate fenestra; MXP, mid-lateral maxillary process; PC, postcleithrum; SC, supracleithrum; SY, symplectic; V1 & 2, 1st and 2nd vertebrae.

upper half of the cleithrum (cf. Fig 2A with Fig 35 in Howes, 1979). The form of the lower jaw in *Inlecypris* more closely resembles that of other members of the cheline group viz *Oxygaster* and *Salmostoma*.

Howes (1979) recognizes three lineages within the cheline group, the cheline lineage being represented solely by the genus *Chela*. Some modification to this classification is now required. *Chela* undoubtedly displays greater cranial and vertebral modifications than does *Inlecypris* (Howes, 1979). The absence in *Chela* of a symphyseal notch and midlateral maxillary ascending process are possibly to be regarded as secondary loss characters – the reductive trend being witnessed in *Inlecypris*. Thus, now *Chela* and *Inlecypris* comprise the cheline lineage which forms the sister group to the combined assemblage of salmostomine and oxygastrine lineages (see cladogram in Howes, 1979).

Writing of the ichthyofauna of the Inle basin, Annandale (1918) noted that of the 17 recorded genera 2 were endemic (*Chaudhuria* (Chaudhuriidae) and *Sawbwa* (Cyprinidae)). *Sawbwa* is a minute, scaleless cyprinid of unknown affinity. It does not possess cheline characters and may possibly belong to a subgroup of the rasborine complex. Annandale (1918) described another cyprinid genus, *Microrasbora*, represented by two species in the Inle basin, *M. rubescens* and *M. erythromicron*. He believed, however, that *Microrasbora* was widespread throughout the Malay Peninsula and that *Rasbora heteromorpha* Dunker, 1904 and *R. maculata* Dunker, 1904 should possibly be included in the genus. Paucity of specimens of *Microrasbora* prevents analysis of osteological characters but superficially its two contained species greatly resemble *Sawbwa* except that they are scaled. As in *Sawbwa* the ethmoid region is narrow and the lower jaw shallow; there is a patch of dark pigment surrounding the vent and the genital pore is enveloped in a thickened sheath. These characters are lacking in *Rasbora heteromorpha* and *R. maculata*.

Thus, it would appear that there are four endemic genera in the Inle basin. Of the cyprinids, *Inlecypris* is a relatively plesiomorph member of its lineage. Its closest relative, the more derived *Chela*, is widespread throughout the South-East Asian archipelago.

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